



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,666	04/02/2004	Fridolin Faist	40124/03001	9692

7590 04/04/2007  
Fay Kaplun & Marcin, LLP  
Suite 702  
150 Broadway  
New York, NY 10038

EXAMINER
----------

LO, SUZANNE

ART UNIT	PAPER NUMBER
----------	--------------

2128

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/816,666

Applicant(s)

FAIST ET AL.

Examiner

Suzanne Lo

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 1-24 have been presented for examination.

***Drawings***

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

**Claim Rejections - 35 USC § 112**

**The following is a quotation of the second paragraph of 35 U.S.C. 112:**

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: a step to model a process control system.

Claim 5 is indefinite with the phrase "only distinct communication links to distinct nodes" is unclear how the communication links are mapped to distinct nodes whether there is a one to one mapping of the link to nodes or several links with one node or one link with several nodes. Furthermore, the specification of the instant application does not clearly define the metes and bounds of this limitation.

Claim 8 is indefinite "conventional interface methods" as it is unclear what interface methods

Art Unit: 2128

Applicant is claiming. Furthermore, the specification of the instant application does not clearly define the metes and bounds of this limitation.

Claims 20-21 are indefinite as it is unclear what is meant by a "frame application" and the specification of the instant application does not clearly define the metes and bounds of this limitation.

There are numerous instances of indefinite claim language due to a lack of antecedent basis. For example, claim 1 recites the limitation "the topography" in the second line. There is insufficient antecedent basis for this limitation in the claim. Other instances of a lack of antecedent basis include but are not limited to: claim 1, "the current arrangement", "the state of the elements"; claim 2, "the position of the input windows", "the current operation"; claim 3, "the communication status"; claim 4, "the state of the associated user interface". As the claims are replete with 112 issues, Applicant is required to correct all errors.

#### **Claim Interpretation**

4. The clauses "to thereby be able to" of claims 1 and 14 and "is adapted to" of claims 15-21 add nothing to the patentability of said claims. Specifically, claims 15-24 are directed to a process control system that is adapted to perform various functions. Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure (See MPEP 2111.04).

#### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2128

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 15-24 are rejected** under 35 U.S.C. 102(b) as being clearly anticipated by **Meystel et al.** (U.S. Patent No. 6,102,958).

As per claim 15, Meystel is directed to a process control system comprising a host PC and at least one target apparatus connected to the host PC via a bus system (column 9, lines 35-47), whereby the process control system is adapted to be displayed in form of a tree structure on an input window, whereby the tree structure comprises nodes, each node providing at least one input window having a plurality of attributes for setting and/or monitoring a target apparatus assigned thereto, whereby a memory of the process control system is adapted to store the arrangement of the tree structure as a project, and a list of all windows opened during operation as well as their attributes as an operating session being automatically restorable during reloading of the process control system.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 2128

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1-6 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dynasim AB ("Dymola Dynamic Modeling Laboratory User's Manual") in view of Smith et al. (U.S. Patent Application Publication 2002/0149628 A1).**

As per claim 1, Dynasim is directed to a method for automatic modeling a process control system (page 13, "Features of Dymola", 1<sup>st</sup> paragraph), whereby elements of a user interface are arranged in a tree structure reflecting the topography of the elements in the process control system (page 15, 1<sup>st</sup> Figure and accompanying text), whereby each element is assigned to at least one input window having a plurality of attributes for setting and/or monitoring a target apparatus controllable in the process control system (page 18, 1<sup>st</sup> Figure and accompanying text, pages 24-25), whereby the current arrangement of the tree structure is stored as a project (page 23, "Introduction" and page 27, 1<sup>st</sup> paragraph) but fails to explicitly disclose a list of all windows opened during the same current operation as well as their attributes are stored as an operating session, to thereby be able to restore the state of the elements when loading the process control system again.

Smith teaches a list of all windows opened during the same current operation as well as their attributes are stored as an operating session, to thereby be able to restore the state of the elements when loading the process control system again ([0190] and Table 6). It would have been obvious at the time of the invention to an ordinary person skilled in the art to combine the modeling of a process control system

Art Unit: 2128

method of Dynasim with the list of windows and attributes stored as an operating session in order to provide a variety of arrangements of a user interface to an operator (**Smith, [0190]**).

**As per claim 2**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby a handling software is used to store the tree structure as well as the list of windows and their attributes, whereby the handling software further stores the position of the input windows during the current operation (**Smith, [0190]**).

**As per claim 3**, the combination of Dynasim and Smith already discloses the method according to claim 2, whereby the handling software stores the communication status, indicating an online or offline status, respectively, for storing the state of the elements (**Dynasim, pages 142-144**).

**As per claim 4**, the combination of Dynasim and Smith already discloses the method according to claim 2, whereby the handling software for storing the state of the elements stores the state of the associated user interface of the respective input windows (**Smith, [0190]**).

**As per claim 5**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby only distinct communication links to distinct nodes of the complete project are selected to be restored (**Dynasim, page 159**).

**As per claim 6**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby the input windows for setting and monitoring the target apparatus provided by the elements in the project tree serve for display of measured values, for diagnosis or for parametrizing (**Dynasim, page 36-37**).

**As per claim 8**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby the state of the input windows opened during operation of the process control system is queried and stored by conventional interface methods (**Dynasim, page 18, 1<sup>st</sup> Figure and accompanying text**).

Art Unit: 2128

As per **claim 9**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby the projects and the associated states of the elements of the project are stored in project files (**Dynasim, pages 24-25**).

As per **claim 10**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby session information is stored in the project files or references to the files including session information are stored (**Dynasim, pages 24-25, and 124**).

As per **claim 11**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby upon opening the project it is verified whether session information is present, and if present, the last present view of the project with all opened dialogs is restored and all connections of the last session are restored (**Dynasim, pages 124, 142-144**).

As per **claim 12**, the combination of Dynasim and Smith already discloses the method according to claim 1, whereby a session manager manages a list of sessions and the names of the active sessions for each project and stores the latter in a non-volatile project directory (**Dynasim, page 124**).

As per **claim 13**, the combination of Dynasim and Smith already discloses the method according to claim 12, whereby the session manager offers a dialog during loading of a project, in which the names of all available sessions for a project are offered for selection (**Dynasim, page 124**).

**Claim 14** is directed to a method for automatic modeling a process control system comprising at least one target apparatus, composed of elements with the same limitations as the elements of claim 1 and therefore is rejected over the same prior art combination.

7. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dynasim AB ("Dymola Dynamic Modeling Laboratory User's Manual") in view of Smith et al. (U.S. Patent Application Publication 2002/0149628 A1) in further view of Kim et al. ("A Two-Stage Modeling and Simulation Process for Web-Based Modeling and Simulation").

As per claim 7, the combination of Dynasim and Smith already discloses the method according to claim 1, but fails to explicitly disclose whereby the current state of the input windows opened during operation of the process control system is transmitted to the handling software in a XML string. Kim teaches representing dynamic model information using XML (**page 232 and Figure 1 and accompanying text**). It would have been obvious at the time of the invention to an ordinary person skilled in the art to combine the process control modeling method of Dynasim and Smith with the XML handling software in order to represent both geometry and dynamic model information effectively.

8. Claims 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meystel et al. (U.S. Patent No. 6,102,958) in view of Dynasim AB ("Dymola Dynamic Modeling Laboratory User's Manual") in further view of Smith et al. (U.S. Patent Application Publication 2002/0149628 A1).

As per claim 15, Meystel is directed to a process control system comprising a host PC and at least one target apparatus connected to the host PC via a bus system (**column 9, lines 35-47**) but fails to explicitly disclose whereby the process control system is adapted to be displayed in form of a tree structure on an input window, whereby the tree structure comprises nodes, each node providing at least one input window having a plurality of attributes for setting and/or monitoring a target apparatus assigned thereto, whereby a memory of the process control system is adapted to store the arrangement of the tree structure as a project.

Dynasim teaches whereby the process control system is adapted to be displayed in form of a tree structure on an input window (**page 15, 1<sup>st</sup> Figure and accompanying text**), whereby the tree structure comprises nodes, each node providing at least one input window having a plurality of attributes for setting and/or monitoring a target apparatus assigned thereto (**page 18, 1<sup>st</sup> Figure and accompanying text, pages 24-25**), whereby a memory of the process control system is adapted to store the arrangement of the tree structure as a project (**page 23, "Introduction" and page 27, 1<sup>st</sup> paragraph**). It would have been

Art Unit: 2128

obvious at the time of the invention to an ordinary person skilled in the art to combine the process control system of Meystel with the user interface of Dynasim in order to allow customization of the user interface (**Dynasim, page 23**).

Meystel and Dynasim fail to explicitly disclose and a list of all windows opened during operation as well as their attributes as an operating session being automatically restorable during reloading of the process control system. Smith teaches a list of all windows opened during the same current operation as well as their attributes are stored as an operating session, to thereby be able to restore the state of the elements when loading the process control system again (**[0190] and Table 6**). It would have been obvious at the time of the invention to an ordinary person skilled in the art to combine a process control system of Meystel and Dynasim with the list of windows and attributes stored as an operating session in order to provide a variety of arrangements of a user interface to an operator (**Smith, [0190]**).

**As per claim 16**, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the memory is adapted to store the position of the input windows (**Smith, [0190]**).

**As per claim 17**, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the memory is adapted to store the communication status, indicating an online or offline status, respectively, of the input window (**Dynasim, pages 142-144**).

**As per claim 18**, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the memory is adapted to store the state of the user interface associated to respective input windows (**Smith, [0190]**).

**As per claim 19**, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the memory is adapted to store several operating sessions for each project (**Dynasim, page 124**).

Art Unit: 2128

As per claim 20, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the system is adapted to be implementable permanently in a frame application (page 13, "Features of Dymola").

As per claim 21, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the system is adapted to be implementable into the frame application as add-in (page 13, "Features of Dymola").

As per claim 22, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the input windows are windows for visualizing measurement values obtained by the at least one target apparatus (Dynasim, pages 36-37).

As per claim 23, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, whereby the input windows are windows for diagnosis messages (Dynasim, pages 36-37).

As per claim 24, the combination of Meystel, Dynasim, and Smith already discloses the process control system according to claim 15, comprising a session manager (Dynasim, page 124).

### **Conclusion**

9. The prior art made of record is not relied upon because it is cumulative to the applied rejection.

These references include:

1. U.S. Patent Application Publication 2004/0254949 A1 published by Amirthalingam on 12/16/04.
2. U.S. Patent No. 6,993,723 B1 issued to Danielsen et al. on 01/31/06.
3. U.S. Patent Application Publication 2002/0199123 A1 published by McIntyre et al. on 12/26/02.
4. U.S. Patent Application Publication 2004/0117766 A1 published by Mehta et al. on 06/17/04.

Art Unit: 2128

10. All Claims are rejected.

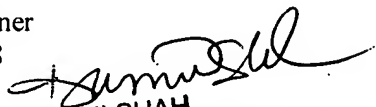
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzanne Lo whose telephone number is (571)272-5876. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571)272-2297. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SL  
3/15/07

Suzanne Lo  
Patent Examiner  
Art Unit 2128

  
KAMINI SHAH  
SUPERVISORY PATENT EXAMINER